INSTALLATION INSTRUCTIONS

CE 0088

for the

Asepsis 21™ Duo Wall /Cabinet Mount

SECTION I - REQUIREMENTS

1. PHYSICAL REQUIREMENTS 1
2. SUGGESTED ROOM LAYOUT 2
3. ELECTRICAL REQUIREMENTS 2
4. WATER SUPPLY REQUIREMENTS 2
5. AIR SUPPLY REQUIREMENTS 2

SECTION II - INSTALLATION

1. UNPACKING THE CARTONS 3
2. UTILITIES CONNECTION BOX (J BOX) INSTALLATION 3
3. ELECTRICAL CONNECTIONS TO THE CONNECTION BOX (J BOX) 3
4. INSTALLING THE MOUNT & FLEX ARM (WALL MOUNT ALTERNATIVE) 4
5. INSTALLING THE MOUNT & FLEX ARM (CABINET MOUNT ALTERNATIVE) 5
6. INSTALLING THE DUO UNIT 6
7. TUBING CONNECTIONS 7
8. UMBILICAL TUBING CONNECTIONS TO THE UTILITIES CONNECTION BOX (J BOX) 8

SECTION III - CONTROLS

1. ASEPSIS 21 HANDPIECE DELIVERY SYSTEM CONTROLS 9
2. EXTERNAL CONTROLS AND FUNCTIONS 10

SECTION IV - PURGING AND TESTING THE SYSTEM

PURGING AND TESTING THE SYSTEM 11

SECTION V - FINAL CHECK LIST

FINAL CHECK LIST 12

Return To Table Of Contents

Return To Table Of Contents

INSTALLATION INSTRUCTIONS for the Asepsis 21™ Duo Wall /Cabinet Mount

(Rear Delivery System)

SECTION I -REQUIREMENTS

1. PHYSICAL REQUIREMENTS

Before installing, ensure that the physical requirements of the unit are met (See Figure 1 and 2). This unit is designed to be mounted to a wall or cabinet and to function as a rear delivery system.

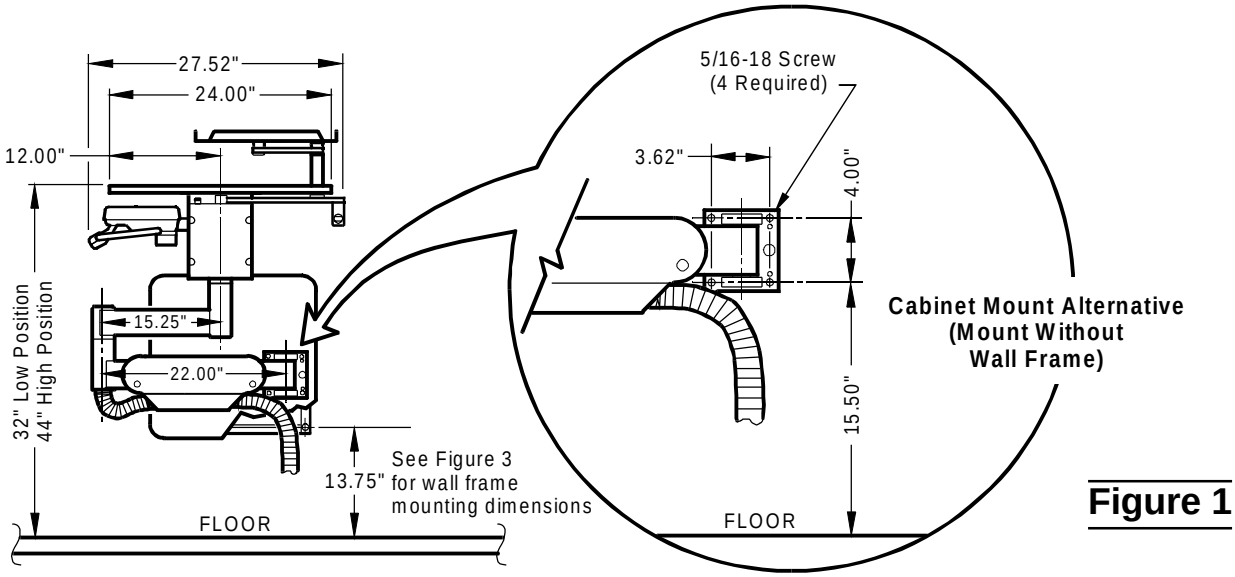
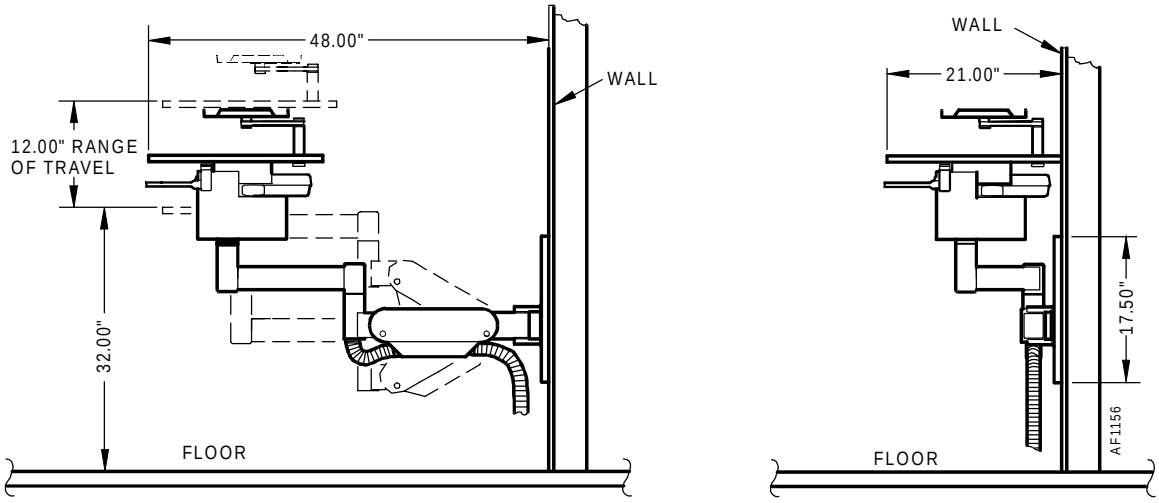


Figure 1



SECTION I - REQUIREMENTS (CONT)

2. SUGGESTED ROOM LAYOUT

The room layout shown is a suggestion and is not meant to be restrictive in any way. This layout may be altered to fit the situation or suit the doctor's personal preferences (See Figure 2).

3. ELECTRICAL REQUIREMENTS

Before connecting the line cord to an appropriate receptacle, make certain that the circuit is protected by a 15-amp circuit breaker for 120-VAC models, or a 7.5-amp breaker for 240-VAC models. Ensure that all wiring is grounded and all electrical codes are observed.

WARNING - Potential shock hazard with possible personal injury. To reduce shock hazard, observe all electrical codes.

4. WATER SUPPLY REQUIREMENTS

A 1/2 I.D. copper supply line, reduced to 3/8" O.D. copper tubing as near the shut-off valve as possible is required. The water pressure should be in the range of 30-50 psi. A suitable pressure reducing valve is essential for trouble free operation if the pressure exceeds the recommended range.

5. AIR SUPPLY REQUIREMENTS

A 1/2" I.D. copper supply line reduced to 3/8" O.D. copper tubing as near the shut-off valve as possible is required.

The air pressure must be between 75-100 psi at the valves. A pressure reducer should be installed if the pressure exceeds 100 psi.

For maximum life and trouble free operation, the air supply must be clean and dry. It is recommended that a moisture separator and filter be installed as near the connection as possible and accessible for periodic cleaning.

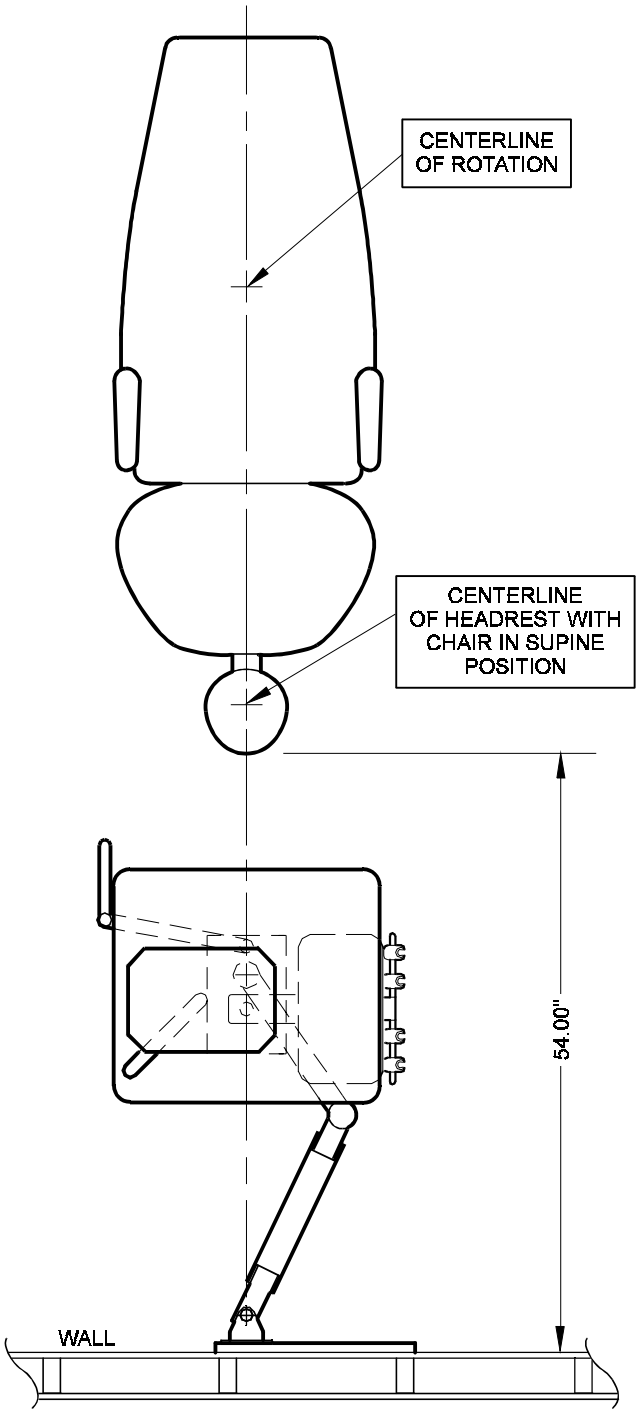


Figure 2

SECTION II - INSTALLATION

1. UNPACKING THE CARTONS

The unit is shipped in two cartons containing the following items:

LARGE BOX

- Large work surface
- Asepsis 21 instrument head and fixed arm assembly
- Flex arm assembly
- Tub or tray assembly

SMALL BOX

- Wall mounting frame and cover
- Wall mount kit (bearing plate, hardware, etc.)
- Installation instructions (this manual), an operator's manual, and warranty card

Check for signs of damage to the carton or to the contents. Make sure all items listed above are present. If there is any evidence of damage due to shipping or if any of the items are missing from the carton, notify the shipper at once. Be careful not to discard any small parts or instruction sheets with the packing material.

2. UTILITIES CONNECTION BOX INSTALLATION

The installation of the utilities connection box should be performed by a qualified technican. Refer to the installation plan TP1191 supplied with the connection box. This plan may be used as a template to locate the utilities for connection.

Please consider the following before beginning:

- The connection box can be installed anywhere in the room within the range of the 8 foot umbilical that will connect the box to the unit. Locate the box where the incoming service lines will not cause an obstruction.
- Air and water are the only services required unless a heated syringe or lighted handpieces are to be used.
- Waste lines, vacuum lines or auxiliary low voltage wiring are not necessary unless separate devices requiring these services are to be used.
- The location of the incoming services on the installation plan are suggestions and can be altered to suit the situation.

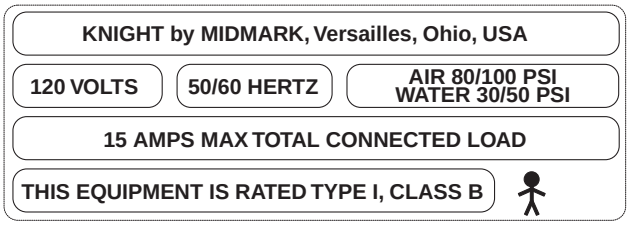
3. ELECTRICAL CONNECTIONS TO THE CONNECTION BOX (J BOX)

Domestic - Make the electrical connections to the J box as shown in Instruction TPW1487.

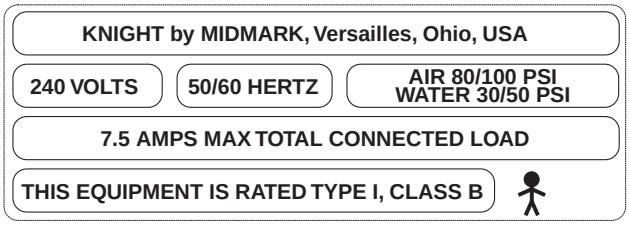
International - Make the electrical connections to the J box as shown in Instruction TPW1511. These J boxes have accessible fuses located on the front of the box.

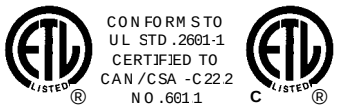
DANGER: Turn off all electrical power at the power source before making primary electrical connections.

RATING FOR 120 VOLT UNIT


KNIGHT by MIDMARK, Versailles, Ohio, USA
120 VOLTS
50/60 HERTZ
AIR 80/100 PSI
WATER 30/50 PSI
15 AMPS MAX TOTAL CONNECTED LOAD
THIS EQUIPMENT IS RATED TYPE I, CLASS B

RATING FOR 240 VOLT UNIT


KNIGHT by MIDMARK, Versailles, Ohio, USA
240 VOLTS
50/60 HERTZ
AIR 80/100 PSI
WATER 30/50 PSI
7.5 AMPS MAX TOTAL CONNECTED LOAD
THIS EQUIPMENT IS RATED TYPE I, CLASS B



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SECTION II - INSTALLATION (CONT)

4. INSTALLING THE MOUNT AND FLEX ARM (WALL MOUNT ALTERNATIVE)

The unit can be attached to any wall sound enough to support the unit in operation. Please use the following instructions:

1. The unit is supplied with a mounting frame that has been predrilled with 8 mounting holes on 16" centers. Use the frame as a template to locate these holes on the wall (See Figure 3).
2. Using the eight lag screws and washers provided, attach the frame to the wood studs of a wood frame constructed wall (See Figure 4).
3. Attach the frame cover to the frame using the four #10 panel screws provided.
4. Mount the flex arm assembly and the bearing plate to the mounting frame using four 1/4"-20 hex bolts and washers. **Do not tighten all the way.**
5. Check the level at the flex arm bearing housing (See Figure 5). Using the four adjustment set screws in the flex arm mount, make sure the flex arm is plumb in all positions. Tighten the four 1/4"-20 Hex Bolts that were left loose in step 4.

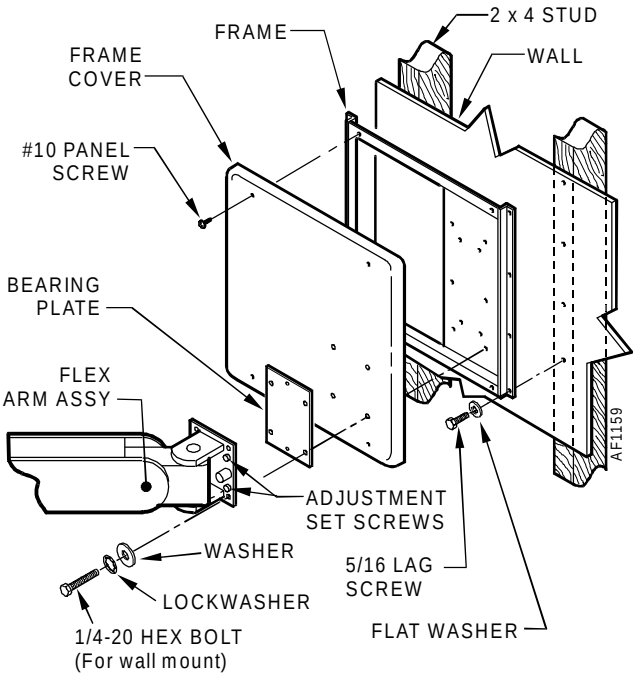


Figure 4

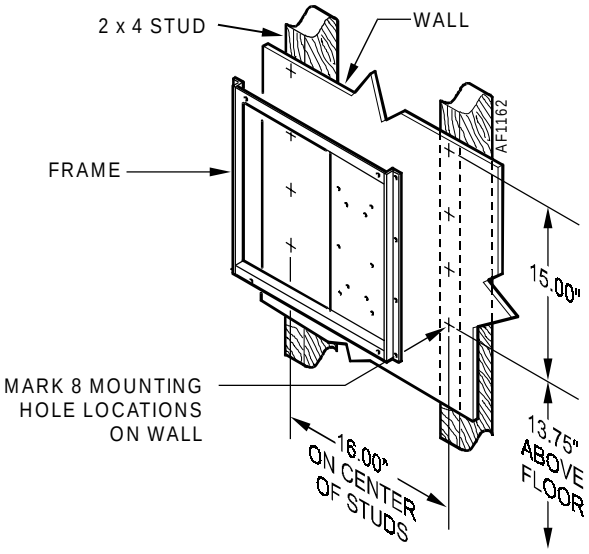


Figure 3

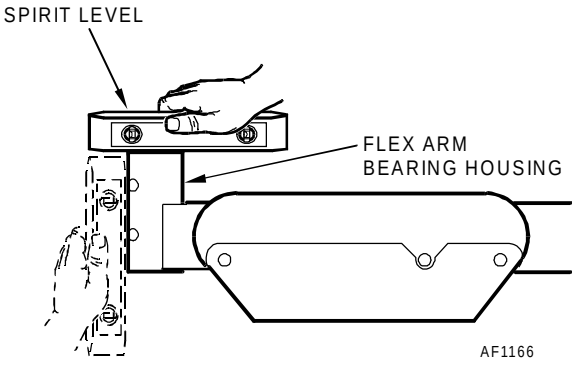


Figure 5

SECTION II - INSTALLATION (CONT)

5. INSTALLING THE MOUNT AND FLEX ARM (CABINET MOUNT ALTERNATIVE)

The unit can be attached to any cabinet sound enough to support the unit in operation. Please use the following instructions:

1. Using the bearing plate as a template, located and drill the mounting holes (See Figure 6).
2. Install the bearing plate on the cabinet by inserting two 8-32 painted screws through the bearing plate and into the 1/4" holes in the cabinet. Position the backing plate on the back side of the cabinet and tighten the screws (See Figure 7).
3. Mount the flex arm assembly onto the bearing plate using four 1/4"-20 hex bolts and washers. **Do not tighten all the way.**
4. Check the level at the flex arm bearing housing (See Figure 5). Using the four adjustment set screws in the flex arm mount, make sure the flex arm is plumb in all positions. Tighten the four 1/4"-20 Hex Bolts that were left loose in step 3.

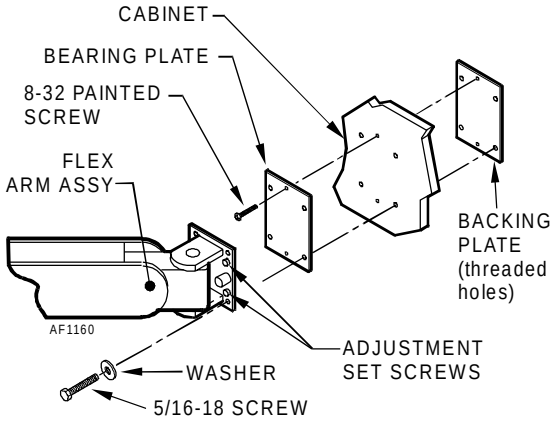


Figure 7

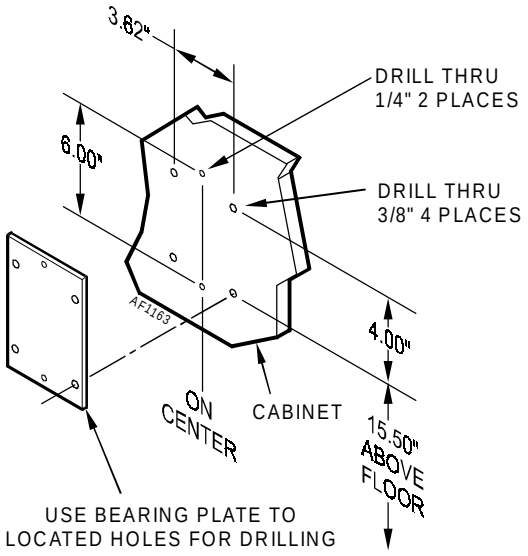


Figure 6

SECTION II - INSTALLATION (CONT)

6. INSTALLING THE DUO UNIT

After the mount and flex arm assembly is installed and level, the duo unit fixed arm assembly is mounted to the flex arm. Please use the following instructions:

1. Remove the bottom cover by removing the four screw covers, screws and screw bases (See Figure 8).
2. Thread the full length of the umbilical down through the flex arm bearing and insert the fixed arm hub into the flex arm bearing (See Figure 9).

NOTE ▶ **Make certain the plastic washer is in the position shown in Figure 7 before seating the fixed arm hub into the bearing.**

3. Tighten the lower 1/4"-20 set screw (stainless steel) to hold the outer umbilical hose in the bearing.
4. Tighten the upper 1/4"-20 set screw (brass tipped) until the desired fixed arm rotation friction is obtained.
5. Connect the 1/8" green air brake control tube (located at the mid point of the umbilical) to the 1/8" green air brake cylinder tube (located through the access hole on the bottom of the flex arm .
6. Replace the bottom cover. Take care not to pinch the green air brake control tube.
6. Route the umbilical to the utilities connection box and make the connections (See Figure 10 and 11).

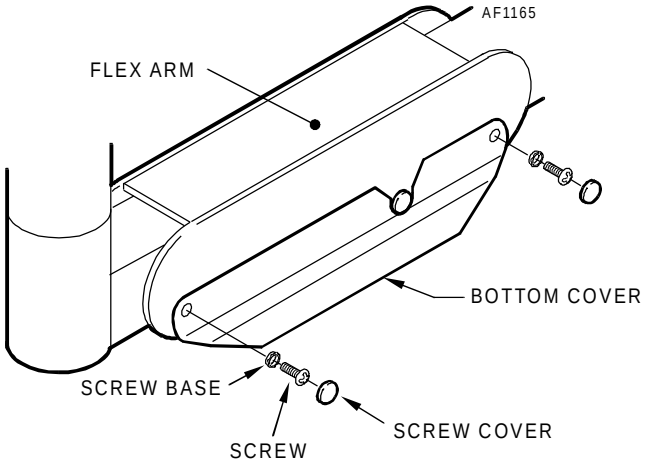


Figure 8

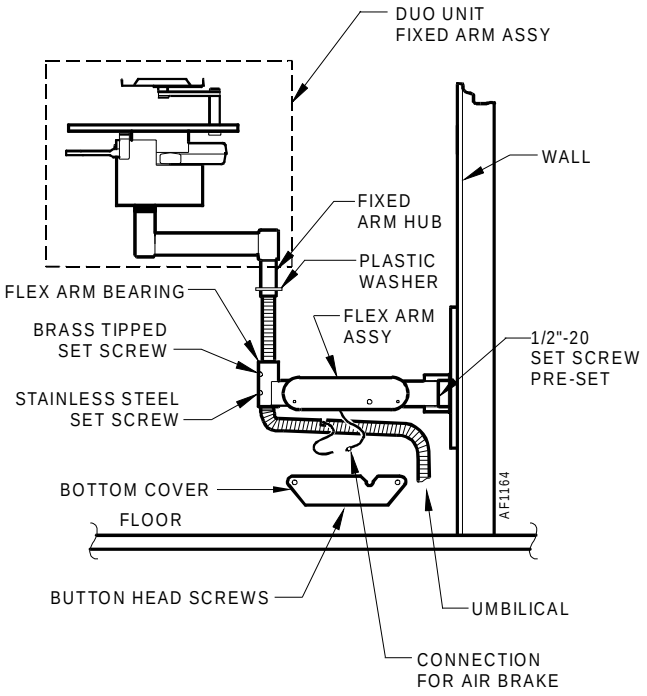


Figure 9

SECTION II - INSTALLATION (CONT)

7. TUBING CONNECTIONS

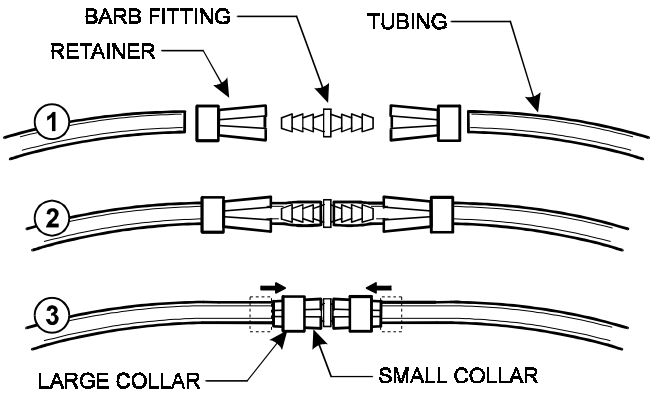
When connecting the umbilical tubings to the unit or other tubing, use the plastic retainers to secure the connection (Refer to Figure 10).

1/8" Tubing Connection

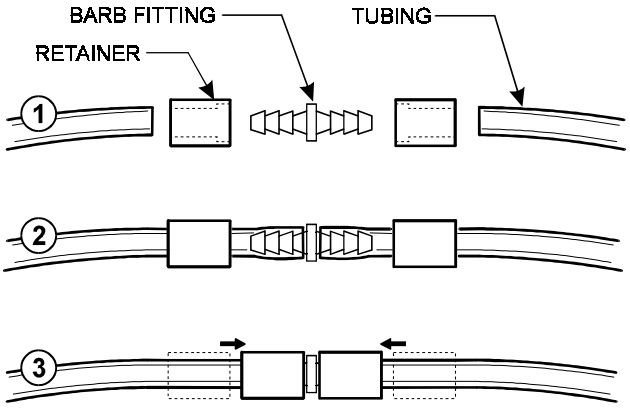
1. Slip the retainer (large end first) onto the tubing.
2. Push tubing onto the barb fitting and slide the retainer forward over the tubing on the barb fitting.
3. Break the large collar loose and slide it toward the fitting and over the small collar.

1/4" Tubing Connection

1. Slip the retainer onto the tubing with the large opening toward the end of the tubing.
2. Push the tubing onto the barb fitting.
3. Slide the retainer over the tubing on the barb fitting.



1/8" TUBING CONNECTION



1/4" TUBING CONNECTION

Figure 10

SECTION II - INSTALLATION (CONT)

8. UMBILICAL TUBING CONNECTIONS TO THE UTILITIES CONNECTION BOX (J BOX)

Figure 11 shows the connections to be made inside the J box. Refer to installation plan TP1191 supplied. This plan may be used as a template to locate the utilities for connection. The installation should be performed by a qualified technician.

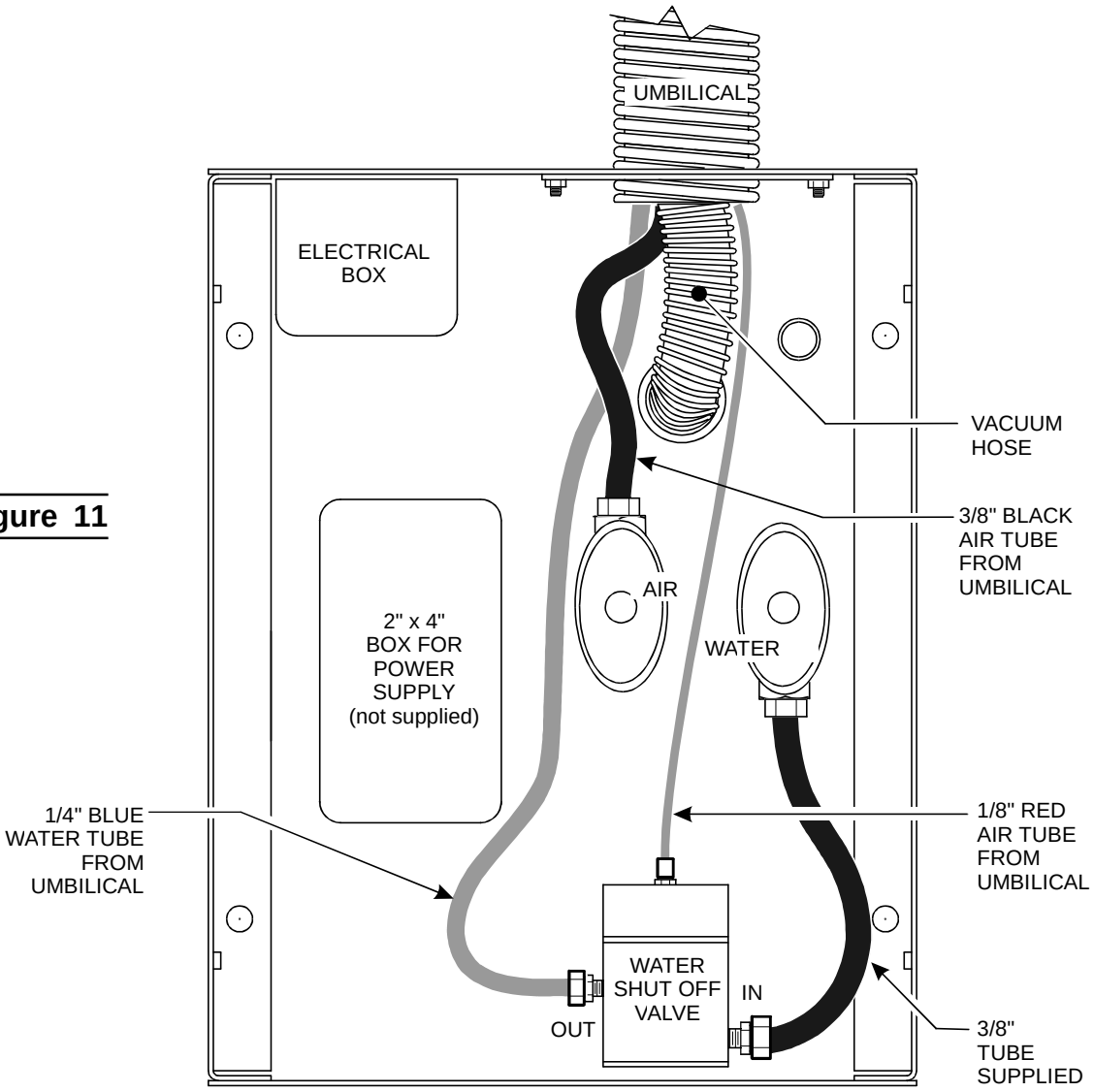


Figure 11

SECTION III - CONTROLS

1. ASEPSIS 21 HANDPIECE DELIVERY SYSTEM CONTROLS LOCATED UNDER COVER

A complete set of handpiece and syringe adjustments are located directly under the magnetically held cover for protection against contamination. Lift up either back corner of cover for easy removal. All controls are labeled with symbols identifying their function. A description follows and their locations are identified below.

1 2 3 HANDPIECE COOLANT WATER VOLUME
Adjusts the amount of coolant water to each respective handpiece.

4 5 6 DRIVE AIR PRESSURE SETTING
Individual adjustments are provided - one for each respective handpiece. Use to set maximum handpiece pressure indicated on gage. Refer to handpiece manufacturer's specifications for proper setting.

7 SYRINGE AIR VOLUME ADJUSTMENT
Controls the volume of air to the syringe and effects air water spray pattern.

8 SYRINGE WATER VOLUME ADJUSTMENT
Controls the volume of water to the syringe and effects water spray pattern.

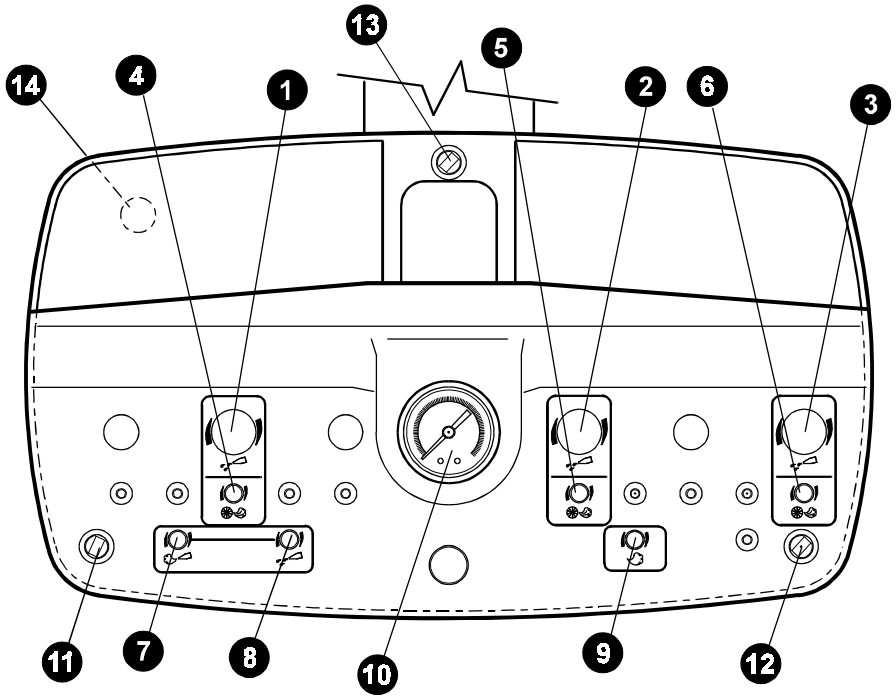
9 COOLANT AIR VOLUME ADJUSTMENT
This adjustment controls the volume of coolant delivered to each handpiece. It effects the spray pattern of air and water at the handpiece. If the handpiece has a coolant air connection in the handpiece itself, this adjustment will have no effect and can be completely shut off.

10 HANDPIECE PRESSURE GAGE
Indicates individual handpiece pressure when handpiece is operating.

11 12 13 MAGNETIC LATCHES
These hold the cover in place.

14 HANDPIECE COOLANT WATER FLUSH BUTTON
controls the coolant water flush valve located on the underside of the delivery head.

Figure 12 ASEPSIS 21 INSTRUMENT HEAD WITH TOP COVER REMOVED



SECTION III - CONTROLS (CONT)

2. EXTERNAL CONTROLS AND FUNCTIONS:

MASTER ON /OFF VALVE

Located on the bottom of the instrument head directly behind the handpiece holder bar support, this two position toggle control turns the main air and water on or off the utilities box. Up position is on.

AUTOMATIC HANDPIECE ACTIVATION

The automatic kink valves are designed to permit activation of the selected handpiece when it is removed from its holder. Drive air will be delivered to the withdrawn handpiece when the foot control is depressed.

WET/DRY FOOT CONTROL

The disc-type foot control operates the selected handpiece at varying speeds depending upon the foot pressure applied to the disc. Positioning the coolant water selector toggle allows coolant water for wet cutting to be selected by the motion of the foot. Applying foot pressure to the disc will operate the selected handpiece and, if turned on, water spray.

WATER ON/OFF VALVE

Located on the foot control, this switch provides water for coolant spray to the handpiece when the switch is moved forward to the “On” position (toward blue dot) and the foot control is depressed (wet cutting). When the valve is in the “Off’ position, water will not be delivered to any handpiece.

WATER OUTLET AND FLOW CONTROL

Located on the front panel of the unit, the water outlet provides water for hydrocolloid tubing or other accessories. The water is controlled by a flow control knob located next to the water outlet. Turning the knob clockwise will decreases water flow and counterclockwise increases the flow.

ASSISTANT'S INSTRUMENTATION

A saliva ejector, HVE and syringe are standard instrumentation on the unit. They are positioned on a movable holder that slides into the console or on the chair headrest.

Return To Table Of Contents

SECTION IV - PURGING AND TESTING THE SYSTEM

When the installation is complete you should purge the system to clear the tubing of any foreign material and to purge the air out of the water tubing. This also serves to test the equipment for proper function.

1. Before attaching the handpieces, turn on the air, water and vacuum to the utilities connection box.
2. Open the shut-off valves in the utilities connection box.
3. Turn on the master valve lever on the Asepsis 21 head.
4. Lift the cover off the Asepsis 21 head and turn the coolant water and coolant air volume controls adjustment knobs completely open.
5. Remove a handpiece hose from its holder.
6. Depress the foot control to operate the coolant water and drive air for 30 seconds.
7. Depress the coolant water flush button on the underside of the Asepsis 21 head to allow the water to flow for 30 seconds.
8. Repeat this procedure with each handpiece hose.
9. Operate the air and water for both doctor and assistant's syringes for 30 seconds.
10. Install the handpieces.
11. Set the coolant water and coolant air volume controls to the desired position.

Return To Table Of Contents

SECTION V - FINAL CHECK LIST

When all the assembly and installation procedures are completed, the unit should be checked out in accordance with the following check list to ensure that assembly is complete and that all controls function properly.

☐ Check complete system for any air or water leaks.

☐ Check to make sure there is proper air and water flow to the handpieces.

☐ Check the drive air pressure for the handpiece being used to make sure it is set correctly.

☐ Check the syringes for proper function and water flow.

☐ Be sure the person who will operate the unit receives the Operator's Manual and any other appropriate information or instructions.

☐ If any optional equipment has been installed, make sure it is properly installed and functioning as intended.

Return To Table Of Contents

Return To Table Of Contents

DECLARATION OF CONFORMITY

MIDMARK CORPORATION

Midmark Corporation declares that SW and S-21 Dental Units conforms to the applicable requirements of the Medical Device Directive 93/42/EEC, Annex V and VII.

Serial Numbers: UA1278, UW01032, UC0971, and UK0148 to present.

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TPW1768 Rev. C (12/00)

KA940600

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